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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 19480-2506RE

First Named Inventor: Mats Hylin et al.
Original Patent No.: 6,005,534
Date of Issue: December 21, 1999
Assignee: Dahlgren, Hylin & Jonason Media AB
Title: DIGITAL INFORMATION SYSTEM

PRELIMINARY AMENDMENT IN REISSUE APPLICATION

PURSUANT TO 37 CFR §1.173(b)

Assistant Commissioner for Patents
Box Reissue
Washington, DC 20231

S I R:

Prior to initial examination, please amend the accompanying reissue application for the above-identified patent as follows:

IN THE SPECIFICATION:

Amend the second paragraph of column 1 as follows:

The present invention relates to a method and [to] apparatus for controlling and coordinating projectors in a digital information system for displaying information on at least one display device through the medium of at least one projector for each said device, said information being displayed in places that are accessible to and frequented by a general public. In one particular aspect, the invention is applied to control projectors for displaying information directed towards people in such places as main railway stations, subway stations, airport waiting lounges, etc.

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Amend the third paragraph of column 1 as follows:

Systems that are used to show information in the form of advertisements, timetable messages or arrival and departure times in present-day public service infrastructures with regard to buses, trains, subway traffic, etc., [is] are of a static nature. Such information is given on notice boards, posters, charts, tables, verbally through loudspeakers, and on digital displays, etc. A characteristic feature of such information media is that the information media is not coordinated, but is in the form of individual items which are controlled and updated separately, often manually.

Amend the fourth paragraph of column 1 as follows:

[Modem] Modern digital displays used, e.g., in conjunction with subway railway traffic [gives] give some of the aforesaid information but [is] are not controlled to display advertisements, warning messages, etc. Furthermore, the information is often supplemented with verbal messages transmitted from traffic control centres. The information channel cannot be subscribed to directly for the display of external information suppliers, such as advertising bureaux, the authorities, newspapers, etc., but is processed administratively and fed manually into the information display systems.

Amend the sixth paragraph of column 1 as follows:

Thus, present-day systems do not enable information to be updated dynamically for display in real time. Neither do present-day systems enable external mediators to update information for display in a central control system, nor yet the administrator who makes the display of information available, but [that] it is the administrator who determines when, where and how the information shall be displayed.

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Amend the second full paragraph of column 2 as follows:

An object of the present invention is to provide a flexible system in which external information mediators are able to dynamically control in real time the transmission of display instructions to a larger public in different places situated at any chosen distance apart through projectors which project information onto displays intended [herefor] therefor.

Amend the sixth full paragraph of column 2 as follows:

Information display subscribers are connected to a computerized control centre via computer and telecommunication interfaces for all-day-round transmission of information, wherein the control centre has a communication interface [against] with computerized devices situated in connection with said places for projector coordination and control.

Amend the third full paragraph of column 3 as follows:

The projector may also interrupt display of information when the allocated display devices, or the projector, is/are visually obstructed in said public place. The projector lens can then be covered with a protective device when a dirty atmosphere is detected or anticipated and which is [immanently] imminently likely to dirty the lens.

Amend the fourth full paragraph of column 3 as follows:

In one embodiment, the [projectors] projector is provided with a projector computer which controls and delivers exposures to the projectors controlled by a server included in the computerized device, wherein the projector computer has a buffer memory which is filled with subsequent exposures as the exposure to be displayed at that moment via the projector is emptied from the buffer memory.

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Amend the fifth full paragraph of column 4 as follows:

The illustrated system also includes an advertising agency which is connected to the control centre 12 through the medium of a computer 24 and a modem 26. Although only one modem is shown connected to the central computer 28 of the control centre, it will be understood that modem [poles] pools, telephone switching centres and other similar devices may be used to this end in accordance with present-day techniques.

Amend the third full paragraph of column 5 as follows:

In accordance with the invention, the control centre 12 has a communication interface 14 [against] with the computerized devices 16, 18, 20 situated on shifting positions or places for projector coordination and control.

Amend the first full paragraph of column 6 as follows:

In an alternative embodiment of the device or devices 38, i.e. the projector computers 38, are included in the station computer 34, the projector or projectors 22 is/are controlled directly from the station computer 34.

Amend the second full paragraph of column 7 as follows:

In one [invention] embodiment of the invention, a queue, or line, is created from the information material received by the server 1, in accordance with some known line or queuing method, such as FIFO (First In First Out), LIFO (Last In First Out) or Round Robin, etc., wherein the server 3 or exposure handler 3 has set-up or created an exposure list which covers a twenty-four hour period for information exposure or display via projectors 22. The exposure handler 3 collects and processes, i.e. allocates, information relating to projector control instructions, wherein mediator information is sorted into the exposure list in accordance with the wishes of the mediator 24 or its instructions, when available space is found in the exposure list or in alternative places in the

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exposure list given by the mediator. If the exposure list is completely filled with instructions, the mediator instructions to the control centre remain in the queue list in the servo 1 in readiness for later inclusion in the exposure list, in accordance with a preferred embodiment.

IN THE CLAIMS:

Please amend claims 1, 3-13 and 15-24 as follows:

Claim 1. (amended) A method of dynamically coordinating and controlling projectors in a digital information system to display [information] material in public places on at least one display device, said digital information system including a computerized control center having a plurality of communication interfaces, a plurality of computerized devices situated in proximity to said public places and being connected to said control center wherein each of said computerized devices controls at least one projector, and at least one subscribing information mediator having communications drive routine means for selectively and transparently connecting to said control center, said method comprising:

receiving, by said control center, display information transmitted by said mediators at any time, said display information including booking information, specified by said at least one mediator, for reserving and controlling a time-period to display said display [information] material;

generating, organizing, and dynamically updating an exposure list in real time, by an exposure handler included in said control center, in accordance with said display information, said exposure list also containing projector control instructions based on said [reservation] booking information;

coordinating and controlling select ones of said projectors by said computer devices, in response to said projector control [instruction] instructions

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contained in said exposure list, in order to display said display [information] material on said display device in real time,

wherein said display information in said exposure list specifies a content of display, a location of display, a timing of display, and a duration of display [such that said content, said location, said timing, and said duration are capable of being independently selected], and said exposure list enables each of said select projectors to independently and instantaneously receive said display information through said computerized devices.

Claim 3. (amended) The method of claim [2] 1, wherein said coordinating and controlling includes interrupting said display of [information] material by said select projectors when said display is hidden, obstructed, or otherwise visibly unavailable in said public place.

Claim 4. (amended) The method of claim [3] 1, further including shielding lenses of said select projectors from dirt with protective devices.

Claim 5. (amended) The method of claim [4] 1, further including coupling said select projectors to a projector computer for controlling and feeding said display information to said projectors being controlled by a station computer included in said computerized devices, said projector computer having a corresponding [memory] buffer memory for accommodating subsequently arriving display information while display information of a current display is erased from said buffer memory.

Claim 6. (amended) The method of claim [4] 1, further including a projector computer included in a station computer within said computerized devices for controlling and feeding display information to said projectors, said projector computer having a corresponding [memory] buffer memory for

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accommodating subsequently arriving display information while display information of a current display is erased from said buffer memory.

Claim 7. (amended) The method of claim 6, further including databases within said station computer situated in one of said public places, said databases include display information contained in said exposure list, said [exposure list] contained information capable of being copied into databases of other selected station computers situated in other public places.

Claim 8. (amended) The method of claim [7] 1, further including a plurality of reserved instruction fields in said exposure list for updating display information with said control instructions received from said information mediators via one of said communication interfaces.

Claim 9. (amended) The method of claim 8, further including placing said control instructions in a queue when said exposure list lacks instruction fields for updating said [control instructions] display information.

Claim 10. (amended) The method of claim [9] 1, further including implementing a detector for determining whether a station computer [(34)] is nonfunctional in order to enable projectors being controlled by said nonfunctional station computer to be remotely controlled by a station computer situated at a different public place.

Claim 11. (amended) The method of claim [10] 3, wherein said interrupting of display is used for monitoring by a system administrator to determine whether vehicles are running according to a schedule.

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Claim 12. (amended) The method of claim [11] 1, further including an electronic display with a control computer for each of said computerized devices such that said select projectors supply [information] material to be displayed on said electronic display.

Claim 13. (amended) A system for dynamically coordinating and controlling projectors to display digital [information] material on at least one display device in public places, said system comprising:

a computerized control center for processing [said] display information and having a plurality of communications interfaces to support data transmissions, said control center including an exposure handler for generating, organizing, and dynamically updating an exposure list in real time in accordance with said display information, said exposure list also containing projector control instructions based on said display information;

at least one information mediator for transmitting said display information to said control center at any time, each of said mediators being electronically coupled to said computerized control center via one of said communication interfaces and selectively and transparently connecting to said control center through a communications drive routine means, said display information including booking information, specified by each of said mediators, for reserving and controlling a time-period to display said display [information] material;

a plurality of computerized devices, situated in proximity to said public places, for coordinating and controlling select ones of a plurality of projectors in response to said projector control instructions, each of said computerized devices being electronically coupled to said computerized control center via one of said communication interfaces; and

wherein said display information in said exposure list specifies a content of display, a location of display, a timing of display, and a duration of

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display [such that said content, said location, said timing, and said duration are capable of being independently selected], and said exposure list enables each of said select projectors to independently and instantaneously receive information through said computerized devices.

Claim 15. (amended) The system of claim [14] 13, wherein said select projectors interrupts said display of [information] material when said display is hidden, obstructed, or otherwise visibly unavailable in said public place.

Claim 16. (amended) The system of claim [15] 13, further including protective devices to shield lenses of said select projectors from dirt.

Claim 17. (amended) The system of claim [16] 13, wherein said select projectors are coupled to a projector computer which controls and feeds said display information to said projectors controlled by a station computer included in said computerized devices, said projector computer having a corresponding [memory] buffer memory for accommodating subsequently arriving display information while display information of a current display is erased from said buffer memory.

Claim 18. (amended) The system of claim [16] 13, wherein a station computer included in said computerized devices is provided with a projector computer which controls and feeds display information to said projectors, said projector computer having a corresponding [memory] buffer memory for accommodating subsequently arriving display information while display information of a current display is erased from said buffer memory.

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Claim 19. (amended) The system of claim 18, wherein said station computer is situated in one of said public places and includes databases with display information contained in said exposure list, said [exposure list] contained information capable of being copied into databases of other selected station computers situated in other public places.

Claim 20. (amended) The system of claim [19] 13, wherein said exposure list includes a plurality of reserved instruction fields for updating display information with said control instructions received from said information mediators via one of said communication interfaces.

Claim 21. (amended) The system of claim 19, wherein said control instructions are placed in a queue when said exposure list lacks instruction fields for updating said [control instructions] display information.

Claim 22. (amended) The system of claim [21] 13, further including a detector for determining whether a station computer is nonfunctional in order to permit projectors that are controlled by said nonfunctional station computer to be remotely controlled by a station computer situated at a different public place.

Claim 23. (amended) The system of claim [22] 15, wherein said display [information] interruptions are used for monitoring by a system administrator to determine whether vehicles are running according to a schedule.

Claim 24. (amended) The system of claim [23] 13, wherein each of said computerized devices include an electronic display with a control computer such that said select projectors supply the [information] material to be displayed on said electronic display.

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Please add the following new claims:

Claim 25. A method of selectively displaying digital information at one or more of a plurality of locations, said method comprising:
receiving control instructions from at least one information mediator;
using said control instructions to generate an exposure list, said exposure list specifying display content, display location, display timing and display duration;
displaying images at one or more of said locations in accordance with said exposure list; and
permitting said exposure list to be dynamically updated.

Claim 26. A system for selectively displaying digital information at one or more of a plurality of locations, said system comprising:
a computerized control center having a plurality of communication interfaces for receiving control instructions from at least one information mediator, said computerized control center including means for generating and dynamically updating an exposure list from said control instructions, said exposure list specifying display content, display location, display timing and display duration;
a computerized device situated at each one of said plurality of locations, each computerized device being electronically coupled to said computerized control center; and
a means for displaying images in accordance with said exposure list associated with each one of said computerized devices.

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REMARKS

Respectfully submitted,

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Attorney Docket No. 19480-2506RE

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STATEMENT REGARDING STATUS OF CLAIMS AND SUPPORT
FOR CLAIM CHANGES PURSUANT TO 37 CFR §1.173(c)

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S I R:

Pursuant to 37 C.F.R. § 1.173(c), the reissue applicant in the above-referenced patent respectfully submits the following statement regarding the status of all claims of the patent and the support in the original disclosure for amendments made to the claims:

STATUS OF THE CLAIMS:

As of the date of this statement, Claims 1-26 are pending in the reissue application. No claim has been cancelled. Original claims 1, 3-13 and 15-24 have been amended and new claims 25 and 26 have been added by the preliminary amendment filed concurrently herewith. Original claims 2 and 14 are unchanged.

SUPPORT IN THE ORIGINAL DISCLOSURE:

Claims 1, 3, 12, 13, 15 and 24 have been amended to change "information" to "material." The purpose of these amendments is to better distinguish between the "material" that is displayed on the display devices and the "information" that is provided by the information mediators. The display content is interchangeably referred to as both "material" and "information" in the specification. For instance, lines 63-64 in column 8 state that the "projectors 22 project the information *material* onto the screen" (emphasis

added). Line 6 of column 8 mentions "picture material or exposure material." Thus, the specification provides support for this change.

Claims 1 and 13 have been amended to delete the language "such that said content, said location, said timing, and said duration are capable of being independently selected". The omission of this limitation from claims 1 and 13 is fully supported by the original disclosure. Applicant has added no new language to the claims and therefore has not added anything that was not is not supported by the disclosure.

Each of dependent claims 3-6, 8, 10-12, 15-18, 20 and 22-24 have been amended to change the claim dependency. These amendments in no way change the subject matter of the claims; consequently each of these claims is still supported by the specification

The remainder of the claim changes deal with correcting inadvertent mistakes and informalities in the original patent. These changes correct mistakes that are typographical, grammatical and/or clerical in nature and do not involve any new matter. Accordingly, these changes are supported by the specification.

Respectfully submitted,

Date: 3/2/01

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